

FLOWER BLIGHT OF CAMELLIA

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The camellia, *Camellia japonica*. L., is one of Florida's popular and prized flowering shrubs. It is grown for its beautiful flowers and its handsome evergreen foliage.

Of the relatively few important diseases that affect camellias, flower blight is the most serious. This disease has been recognized in Japan since 1919 (6). Its first report in the United States was from California in 1938 (5). This was followed by reports of its occurrence in Oregon (11), Louisiana (9), Georgia (3), North Carolina (13), South Carolina (1), Alabama, Mississippi (2), Virginia and most recently during the spring of 1971, in Florida² (8).

SYMPTOMS. Flower blight of camellia, as the name implies, is a disease restricted to the flowers in varying stages of development; The first symptoms of infection occur as small, irregular, tan to brown spots on the petals of expanding flowers (Fig. 1A). Under conditions of abundant moisture and warm temperatures (around 70 F) the necrotic spots rapidly enlarge and coalesce until the entire petal and eventually the complete flower becomes almost uniformly dull brown. The veins of infected petals are often darker than surrounding tissue, producing a netted appearance to infected petals which distinguishes flower blight from wind injury or frost damage that usually appears at the tips of the petals. Blighted flowers soon abscise and drop to the ground where they generally retain their shape and firmness due to lack of rapid disintegration. There does not appear to be any known resistance to this disease among the many varieties of camellia.

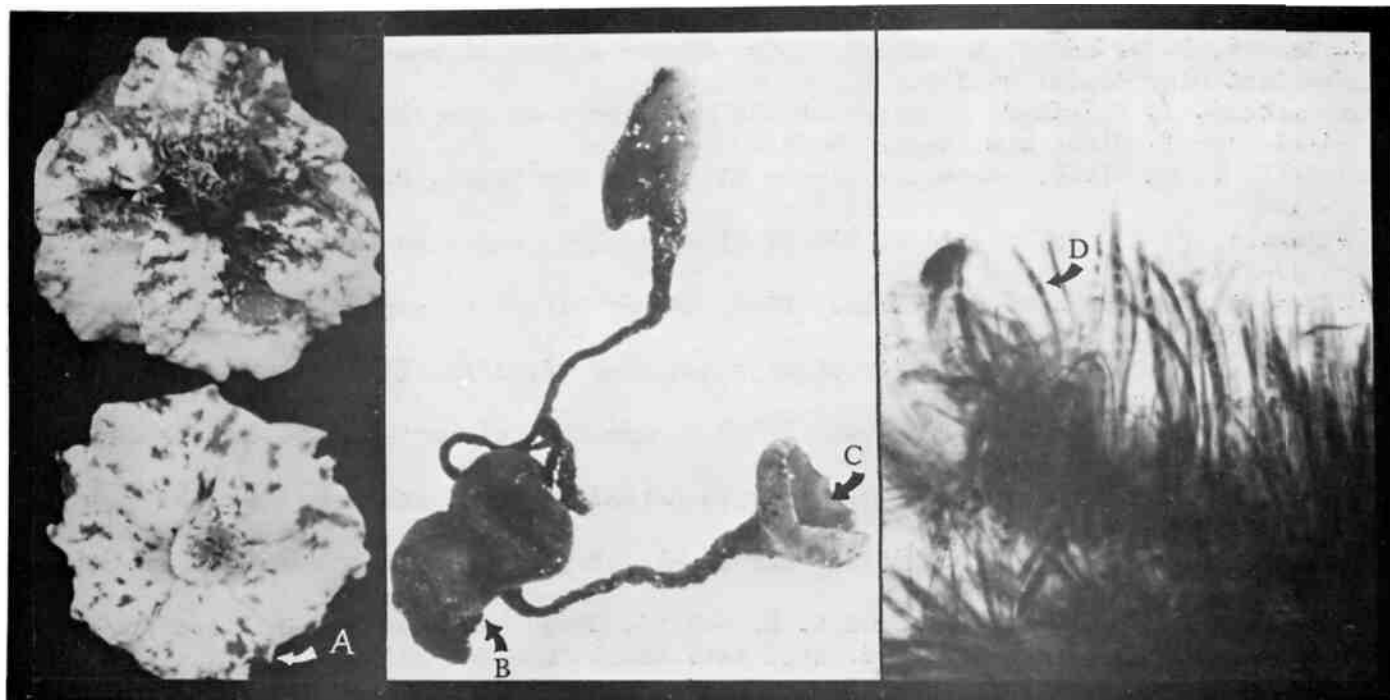


Fig. 1. Flower blight of camellia: A) tan to brown spots on petals; B) fungus sclerotium from infected petal; C) apothecium; D) ascospores.

¹Personal communication with R. L. Self, Auburn Univ., Auburn, Ala. and W. H. Matheny, Dept. of Agr. and Commerce, Richmond, Va.

²Unpublished information. Bureau of Plant Pathology, Division of Plant Industry, Fla. Dept. of Agr. and Cons. Serv.

Flower blight of camellia is caused by the fungus *Sclerotinia camelliae* Hara and appears to be restricted to this host (5). Initial or primary infections are brought about by forcibly ejected spores (ascospores) which are disseminated by air currents or splashing rains from cup-shaped, mushroom-like structures (apothecia) (4). The spore-bearing apothecia measuring from 1/4 to 3/4 inch in diameter supported by stalks (stipes) up to 1⁵ inches long, arise from irregular, hard, black fungus resting structures called sclerotia which are formed in the infected petal tissues of fallen blighted flowers of the previous year and which can remain viable for up to 5 years (10). Figure 1B, C, D illustrates the various stages of the fungus pathogen.

CONTROL. Disease control of flower blight of camellia involves essentially a number of important measures which include exclusion and eradication through sanitation practices and fungicidal applications. Restricting the movement of plants with infected flowers or with infested soil harboring the pathogen is imperative, if excluding the disease from non-infested areas is to be accomplished. Control through eradication is directed mainly toward the suppression of developing sclerotia (overwintering fungus structures) which lie on or are incorporated in the soil or litter beneath the plants and removal of all affected flowers. The sanitation practice of gathering and collecting all fallen flowers, leaves, and litter followed promptly by burning or burying (at least 1 ft deep) reduces significantly the potential for successive yearly infections (4,5). Fungicides applied as eradicants to ground areas beneath and adjacent to infected plants have given some promising results by inhibiting apothecial formation. These fungicides include Terraclor 75 WP (PCNB) applied monthly as a soil drench at the rate of 3 lb/1000 sq ft plus 1 to 4 oz of household detergent (10,12); ferbam 75% applied as a soil drench at the rate of 6 lb/1000 sq ft plus a detergent such as Dreft, Tide, etc. (7); Benlate³ 50 WP applied as a soil drench at the rate of 10 lb/acre.

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³Personal communication with L. W. Baxter, Clemson Univ. and R. L. Self, Auburn Univ.